

MEMORANDUM OF POLICY APPROACH FOR PRE-SCHOOL EDUCATION
DEVELOPMENT

by
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requirements for the degree of Master of Arts in Public Management

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Abstract

The shortage of pre-school education supply is a significant problem, and the Universal Two-Child Policy in 2016 made the imbalance of supply and demand worse. The first wave of baby boomers starts to exert influence to boost the need for pre-school education. Facing the increasing need in the future, the Department of Education needs a deliberated plan to achieve the objective of the Third Action Plan for Pre-school Education. This proposal discusses three implementations to increase the supply of pre-school education, including additional investment in rural areas, building surveillance systems, and providing tax credits for eligible parents. With the proposed plan, the three-year kindergarten enrollment rate will reach 80%, and the one-year kindergarten enrollment rate will reach 95% in 2025.

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MEMORANDUM FOR THE MINISTRY OF EDUCATION OF PRC

FROM: Zheng Dai

SUBJECT: Policy approach for pre-school education development

DATE: September 3rd, 2019

I. Action Force Event

On August 24, 2019, the 12th Meeting of the Standing Committee of the 13th National People's Congress (NPC Standing Committee) reviewed the report of the State Council on the reform and development of pre-school education in China.¹ Attendees of the meeting reached the same recognition that, the problems of "difficulty in entering the kindergarten" and "low affordability of parents for kindergartens" are still a matter of people's livelihood that is highly concerned by the society and vital for pre-school education development in China.²

II. Statement of the Problem

The supply-demand dilemma of pre-school education in China have been long existed since its debut in 2013 when the Second Action Plan for Pre-school Education Development in China was discussed.³ This dilemma was attributed to difficulty in

¹ "Developing Pre-school Education - Members of the Standing Committee of the National People's Congress Hotly Discuss the State Council's Report on the Reform and Development of Pre-school Education," *Xinhuanet* (national owned media), published on August 24, 2019, http://www.xinhuanet.com//2019-08/24/c_1124916999.htm

² Ibid.

³ "Solving the problems of difficulty in kindergarten admission and low affordability of private kindergartens," *China Education Online*, accessed in September 30, 2019, <http://www.eol.cn/html/xueqian/jybx/index.shtml>

public kindergartens admission and low affordability of parents for high-quality private kindergartens. Under the introduction of 2016 Universal Two-Child Policy and other policies to encourage fertility to against the trend of aging society, the dilemma of pre-school education would further burden parents with kindergarten admission difficulty and high tuition and prevent children from equal education opportunities, which hurdle the nation to develop its priorities in labor force, economic growth, and high-quality universal education.^{4,5,6,7} The dilemma of pre-school education is a problem in multiple field that involves finance, fairness and socio-economics, and producing significantly influence on a considerable fraction of parents.

When the 2016 Universal Two-Child Policy taking effect, scholars estimated that there would be 64.1 million children in need of kindergarten positions, which far exceed the supply of existing kindergartens, and three years later, the gap is enlarged to about 68.2 million with the first wave of baby boomers.⁸ Although the pre-school education dilemma burdens parent with kindergarten admission and high tuition, and serves as a reason for the unwillingness of fertility, the Two-Child Policy still demonstrate a significant negative effects on the enrollment situation of pre-school education. In the

⁴ Lijuan Pang, Honglei Wang, and Wu Lv, "Recommendations on Pre-school Education Development under Universal Two-Child Policy Context." *Journal of Beijing Normal University (Social Science)* 6 (2016): 12-21.

⁵ "Pre-school Education Development in the past 5 years," *Ministry of Education of PRC*, published on November 25, 2015, http://www.moe.gov.cn/jyb_xwfb/s5147/201511/t20151125_220935.html

⁶ Ying Tang and Zhihui Wu, "Poverty alleviation through pre-school education: the role, the challenge and the strategy,." *Journal of China Education* 1 (2019): 74-78.

⁷ "From lack of kindergartens to difficulty in kindergarten admission and high tuition burden," *Xinhua News*, published on August 2, 2018, http://www.xinhuanet.com/2018-08/02/c_1123210172.htm

⁸ *Xinhua News*, "From lack of kindergartens to difficulty in kindergarten admission and high tuition burden"

survey from the All-China Women Federation of PRC at the end of 2016, 46.7% of the parents are willing to have a second baby.⁹ Besides, 83.7% of parents indicated that the difficulty in high-quality and affordable kindergarten admission is a considerable problem for them.¹⁰ In addition to that, parents claimed the dilemma has already increased their family living cost and added stress to their lives.¹¹ The commissioner from the NPC Standing Committee reported that the velocity of labor force growth is expected to decrease by 1% on a year to year basis.¹² According to People.Cn, one labor can produce 163 yuan per day (in 2017).¹³ If one worker works for 30 years, the total value of the worker is 1.784 million yuan. That is to say, the GDP created by the labor that the nation should have increased from 2017 to 2018 reduces by 3.12 trillion yuan (in 2017).^{14,15} Combined with the aging problems, the pre-school education dilemma may trouble the country with a shortage of labor force.¹⁶

Pre-school education phrase is vital for one's development in intelligence, morality, and personality.¹⁷ High-quality pre-school education plays a critical role in training talents

⁹ "Report on birth willingness under Two-Child Policy," *All-China Women Federation*, published on December 26, 2016, <http://www.womenofchina.com.cn/html/data/10175-1.htm>

¹⁰ *All-China Women Federation*, "Report on birth willingness under Two-Child Policy"

¹¹ "New policies for access to kindergarten," *China Org.Cn*, published on January 2, 2019, http://www.china.org.cn/china/2019-01/02/content_74332882.html

¹² "Pre-school education should be enrolled in compulsory education system," *Xinhua News*, published on January 10, 2016, http://www.xinhuanet.com/politics/2016-01/10/c_128613188.htm

¹³ "Value created in 120s," *People.Cn* (National owned media, one of the most authoritative media in China), published on December 19, 2018, finance.people.com.cn/n1/2018/1219/c1004-30477174.html.

¹⁴ "2017 Statistical Yearbook of China," *National Bureau of Statistics*, accessed on September 30, 2019, <http://www.stats.gov.cn/tjsj/ndsj/2017/indexch.htm>

¹⁵ "2018 Statistical Yearbook of China," *National Bureau of Statistics*, accessed on September 30, 2019, <http://www.stats.gov.cn/tjsj/ndsj/2018/indexch.htm>

¹⁶ "Pre-school education should be enrolled in compulsory education system," *Xinhua News*, published on January 10, 2016, http://www.xinhuanet.com/politics/2016-01/10/c_128613188.htm

¹⁷ Lingmei Zhang. "The significance of pre-school education to personal development." *Journal of Study* 8 (2017): 233-234.

who are desired by society and rewarded with exuberant finances.^{18,19,20,21} Under the current dilemma, a large number of children, of which the majority is from the poor area, are excluded from receiving pre-school education.^{22,23} With low quality or even completely no pre-school education, children living poor area may have impaired development in childhood, which is critical for their further education. It means that the dilemma could hurdles the nation in poverty alleviation by terms of training talents through education. Under the dilemma's dual effect on training talents and retarding labor force growth, the progress of labor force quality improvement is anticipated to be delayed.^{24,25}

In meanwhile, pre-school education phrase is a critical period where the government can enhance social and education fairness with a reward of economic benefits.^{26 27}

As the Commissioner of NPC Standing Committee stated, the present gap between the urban and the rural, the difference among regions, and the gap among demographic groups in education, are reflecting in the pre-school education level.²⁸ Thus, pre-school

¹⁸ Ibid

¹⁹ Jiayi Wang, Qingyun Feng, and Jin Zhang. "Education and precise poverty alleviation," *Education Research* 37, no. 7 (2016): 12-21.

²⁰ Ying Tang and Zhihui Wu, "Poverty alleviation through pre-school education: the role, the challenge and the strategy,," *Journal of China Education* 1 (2019): 74-78.

²¹ "Celebrating national advocacy month early childhood development in China," *United Nations International Children's Funds China (UNICEF China)*, published on May 25, 2015, <https://www.unicef.cn/stories/celebrating-national-advocacy-month-early-childhood-development>

²² "Education and precise poverty alleviation," Jiayi Wang, Qingyun Feng, and Jin Zhang.

²³ "Expanding the investment in pre-school education," *Legaldaily*, published on August 27, 2019, http://www.legaldaily.com.cn/Finance_and_Economics/content/201908/27/content_7977217.html

²⁴ Legaldaily(National owned media), "Expanding the investment in pre-school education"

²⁵ Jiayi Wang, Qingyun Feng, and Jin Zhang, "Education and precise poverty alleviation".

²⁶ "Allocation towards pre-school education development in China," *National People's Congress of PRC*, published on January 2, 2018, http://www.npc.gov.cn/zgrdw/npc/cwhhy/12jcwh/2018-01/02/content_2036231.htm

²⁷ *UNICEF China*. "Celebrating national advocacy month early childhood development in China"

²⁸ *National People's Congress of PRC*, "Allocation towards pre-school education development in China"

education dilemma is a problem required to be settled for social mobility.²⁹ For social returns, research from James Heckman, a Nobel Prize Winner in Economics, shows that early childhood investment can bring an economic return of 1:17 to society.³⁰

III. History/ Background

The inadequate supply of pre-school education has been recognized since 2010. The three-year kindergarten enrollment was only 50.9% national wide, and 74% of kids have experienced at least one-year pre-school education.³¹ Considering the importance of pre-school education, the Department of Education had decided to invest more money to build public kindergartens, and provide economic incentives, such as tax credits, to companies investing in private kindergartens. Under the guidance of *Outline of the National Medium- and Long-Term Programme for Education Reform and Development (2010-2020)*, China had launched two terms of action plans from 2011 to 2015 for pre-school education development (3-6-year-old children), aiming at enhancing the three-year kindergarten enrollment rate to 60% by 2015 to deal with the shortage of kindergartens.³² After the goal was completed in 2015, the Department of Education structured the third term action plan for the following years in May 2017 and

²⁹ *National People's Congress of PRC*, "Allocation towards pre-school education development in China"

³⁰ *United Nations International Children's Funds China (UNICEF China)*, "Celebrating national advocacy month early childhood development in China"

³¹ "Outline of the National Medium- and Long-Term Programme for Education Reform and Development (2010-2020)," *The Central People's Government of PRC*, published on July 29, 2010, http://www.gov.cn/jrzq/2010-07/29/content_1667143.htm

³² "Outline of Programme for Education Reform and Development" *The Central People's Government of PRC*

settled a 70% three-year enrollment rate as a further goal achieved in 2020.³³

		Fiscal allowance	Tax	Land	Tuition	Admission
Non-public education before reform		Relatively less compared with public education	Favorable tax policies hardly implemented	Favorable land policies unspecified	Degree-granting programs must be approved by relevant authorities. Non-degree programs should be reported to and documented by relevant authorities	Some extent of autonomy
Non-public education after reform	Non-commercial private schools	Fiscal allowance has been raised, more similar to public schools	Tax reductions/ exemptions increased, cost of operation reduced	Multiple favorable land policies	Market-oriented reforms to achieve market-based pricing overtime	Certain level of state governance, autonomy in admission reduced
	For-profit private schools	Fiscal allowance difficult to obtain, need to rely on other channels of financing	Few tax reductions/ exemptions, heavy tax burden	Favorable land policies hardly applicable	Market-based pricing	Full autonomy in admission

Figure 1. Pre-School Education Reform

The Chinese government started a reform of the kindergarten system to clarify the role and responsibility of various kinds of kindergartens. Department of Education submitted new amendments of Private Education Promoted Law to NPC, and NPC passed it to be active in September 2017.³⁴ According to this law, private kindergartens management is divided into for-profit and non-profit and is endowed diversified encouraging policies in terms of for-profit and non-profit kindergartens. To boost the effectiveness of the third action plan, the Chinese government also provides economic incentives for private non-profit private kindergartens.

³³ "Third Action Plan for Pre-school Education Development," *Ministry of Education of PRC*, published on May 2, 2017, http://www.moe.gov.cn/srsite/A06/s3327/201705/t20170502_303514.html

³⁴ *Ministry of Education of PRC*, "Third Action Plan for Pre-school Education Development"

The first two terms of the pre-school investment plan produced a significant influence on national wide. By 2017, the number of kindergartens in China reached 255,000, of which 44.1% were public kindergarten, 26.5% were non-profit private kindergarten, and 29.4% were for-profit private kindergarten.³⁵ The number of pre-school education children reached 197,795,500 people, with an increase of 158,700 people over the previous year. The number of kindergarten teachers and the staff was 4,129,900, with a 9.82% increase of 375,500 from a year earlier. The enrollment rate of pre-school education reached 79.6%, an increase of 2.2 percentage points over the previous year.³⁶

New pre-school education resources, especially the education sector, are tilted towards the countryside, due to the national strategy of poverty reduction. From 2009 to 2014, there were 71,700 new kindergartens nationwide in 2011, and 43131 new kindergartens in 2014. Among them, 13899 were added to the village, accounting for 32.23%; 16945 were added to the township, accounting for 39.29%; 12287 were added to the urban area, accounting for 28.49%. The number of new kindergartens in rural areas (including rural areas and townships) is significantly higher than that in urban areas. The newly added public kindergartens (including public kindergartens) are mainly distributed in rural areas and towns (accounting for 86.55%), urban areas only account for 13.45%.³⁷

The Third Action Plan for Pre-school Education, i.e., the ongoing action plan, did not

³⁵ "MoE will increase the ratio of public and non-profit kindergartens," *Ministry of Education of PRC*, published on November 30, 2018, http://www.moe.edu.cn/jyb_xwfb/xw_zt/moe_357/jyzt_2018n/

³⁶ "Pre-school Education Development in the past 5 years," *Ministry of Education of PRC*, published on November 25, 2015, http://www.moe.gov.cn/jyb_xwfb/s5147/201511/t20151125_220935.html

³⁷ *Ministry of Education of PRC*, "Pre-school Education Development in the past 5 years"

succeed in the success of the first two terms of the action plan. The increment of enrollment rate kept decreasing since 2016 with 8%, and the share of public kindergartens shrank from 70.56% to 68.57%.^{38,39} This deterioration is induced by multiple reasons, including the new political orientation, income factors, and social scandals. With the changing national background, the pre-school education supply is facing new challenges and requiring more effort to deal with threats in the future.

Due to the abrogation of the family planning in China, i.e., the one-child policy, the imbalanced supply of pre-school education will worsen considerably in several years. In 2016, there were 17.86 million newborns in China, a significantly higher number than previous records.⁴⁰ Although the newborns in 2017 were less, with the relative lower willingness of giving birth, the prediction of demand for pre-school education is still negative in the following several years. It will be a critical issue for local governments to deal with the education needs of baby boomers.

Facing the severe supply imbalance, private kindergartens commonly raised their tuitions, and more parents express their concerns on increasing tuitions as a more substantial burden of family expenditures.⁴¹ Tuitions in most private kindergartens are

³⁸ "Education Statistic Report 1997-2017," *Ministry of Education of PRC*, accessed, April 23, 2019, http://www.moe.gov.cn/s78/A03/moe_560/jytjsj_2016/

³⁹ "MoE will increase the ratio of public and non-profit kindergartens," *Ministry of Education of PRC*, published on November 30, 2018, http://www.moe.edu.cn/jyb_xwfb/xw_zt/moe_357/jyzt_2018n/2018_zt11/zt1811_sd/zt181110_mtgz/201811/t20181130_361992.html

⁴⁰ Xiao Tangtianyang, "2001-2018 Annual New Born Population in China," *KANTAR US*. Published on March 26, 2019.

⁴¹ "From lack of kindergartens to difficulty in kindergarten admission and high tuition burden," *Xinhua News*, published on August 2, 2018, http://www.xinhuanet.com/2018-08/02/c_1123210172.htm

even six times to the top universities in China, which is an extremely heavy burden for parents in the middle class.⁴² Some parents have to keep their children at home with their grandparents instead of sending them to private kindergartens.

Moreover, the scandal of private pre-school education provider, RYB, deteriorates the situation further. The announcement of Beijing Police seemed to at least partly vindicated parents who have claimed that children at the kindergarten may have been abused. They said 3-year-olds in one class had described being fed pills that made them drowsy and given shots that left tiny marks on their skin, and some alleged that children were stripped.⁴³ The scandal and several other similar children abuse events make parents worried about the private kindergartens and refuse to send their babies; even they cannot have the admission of public kindergartens.⁴⁴ Besides, the qualification of teachers also introduced some concerns to parents, since private kindergartens do not adopt strict requirements for teachers' education experience and qualifications. The synergy of economic reason and unacceptable reputation prevent parents from sending their children to private kindergartens, intensifying the pressure of supply by public kindergartens.

All these factors force the Department of Education not only to deal with current

⁴² Peter Ford. "In China, kindergarten costs more than college," *The Christian Science Monitor*. Retrieved on October, 13, 2019. <https://www.csmonitor.com/World/Asia-Pacific/2010/0223/In-China-kindergarten-costs-more-than-college>

⁴³ "Teacher detained in Beijing nursery 'needle abuse' probe," *BBC News*, published on November 25, 2017, <https://www.bbc.com/news/world-asia-china-42122972>

⁴⁴ "Chinese teacher suspected of poisoning children's porridge," *BBC News*, published on April 2, 2019, <https://www.bbc.com/news/world-asia-china-47784218>.

imbalance, but also provide practical solution for looming threats. Due to the burden to take care of young children from implementation demands of the Two-Child Policy, extensive workload, the willingness to train good children, and increasing competition among children, parents value the pre-school education more than ever before. Thus, the pre-school education expenditure was on the same track with the total education, increasing from 24.5 billion yuan in 2009 with a 0.07% share in GDP and a 1.38% share in the entire education expenditure to 322.5 billion yuan in 2017 with a 0.38% share in GDP and a 7.57% share in the overall education expenditure.⁴⁵ With the extensively upcoming needs of pre-school education, it will be improbable to solve the threat entirely by investing more money, which will introduce such a heavy burden for the fiscal policy of local governments and the national government. So the Department of Education needs to levy powers from other relevant parties to construct a comprehensive action plan in upcoming years.

IV. Policy Proposal

Based on current deteriorated trend of enrollment rate, it is nearly impossible to reach the pre-settled goal of 2020 because of the abandon of the One-Child Policy.⁴⁶ Further, even with an extended period, it will cost a tremendous amount of money with the past methods in the first two terms of the Universal Program of Pre-school Education since the baby boomer trend.⁴⁷ This memorandum is to propose some sensible policies with

⁴⁵ "Education Expenditure Report," *Ministry of Education of PRC*, accessed April 23, 2019, http://www.moe.gov.cn/s78/A05/cws_left/s7495/

⁴⁶ "Education Statistic Report 1997-2017," *Ministry of Education of PRC*.

⁴⁷ Xiao Tangtianyang. "2001-2018 Annual New Born Population in China," *KANTAR US*.

an appropriate, achievable goal to replace current objectives settled. The goal of this proposal is to ensure that the three-year kindergarten enrollment rate will reach 80%, and the one-year kindergarten enrollment rate will reach 95% in 2025. Besides, the government should shrink the difference in enrollment rates in the urban and rural areas down to 5%. This proposal will contain three policies to fulfill the goal, including initiating more government investment, constructing strict regulation on private kindergartens, and providing a tax deduction to parents who have to send their children to private kindergartens.

First, an additional 45 billion of investment will be assigned to build public kindergartens in remote undeveloped area, where the ratio of public versus private kindergartens is relatively lower than in other areas. Initiating a number of public kindergartens could significantly enlarge the current supply, boosting the enrollment rate in these areas. With relative higher willingness to give birth, enrollment rates in remote areas are critical for achieving the objective.

Second, it would be essential to reuse the current resources by relieving parents' concern about the security of their children in private kindergartens. Initiating strict regulations on private kindergartens could significantly restore parents' confidence in private kindergartens, which usually cannot reach their full capacity currently. The private kindergartens should ensure their teachers and staff having relevant qualifications and be appropriate for working in pre-schools. Besides, setting surveillance cameras in the

classroom is a practical method to proof children's security. Considering the privacy issue, parents should not have real-time access to those cameras, but pre-schools should provide parents access to video records when they have doubts about children's experience in kindergartens. Ensuring the safety of children could reduce parents' concern, partially preventing private kindergartens from wasting their capacities. This implementation could increase enrollment under current resources.

Moreover, it is an assistance program to provide a tax credit for parents who have to send their children to private kindergartens. The tax credit will be an appropriate incentive for parents. The tax credit could effectively help parents who need assistance to afford the extremely high tuition, instead of parents with relatively high income, sending their children to enjoy the luxury facilities of high-end private kindergartens. The amount of tax credit will be decided by the median tuition of local private kindergartens, which accepts children who had failed in the lucky draw conducted by public kindergartens. Provincial Bureau of Education is required to collect the information of tuitions in private kindergartens in June 2020, in order to prepare to exert this tax credit policy in September 2020.

These policies require law as a reference and some increased budget for the next five-year period, and 2020 is an appropriate timing for legalizing them. The several current amendments of pre-school education are attached to the Education Promoted Law of comprehensive education, instead of a specific regulation towards the pre-school

period.⁴⁸ In 2018, the Chinese Central Government had required the Department of Education to initiate the Pre-School Education Law in 2020, and these policies could be discussed in the draft of the law.⁴⁹ After the Pre-School Education Law is approved by the National People's Congress, the Department of Education will start the surveillance cameras installation program by allocating 40 billion yuan of the additional budget to the provincial Bureau of Education by numbers of kindergartens in each province and require all kindergartens install cameras in proper position and ensure their teachers and staff qualified before June 2021. In June 2020, the local municipal government should gather the information of qualified families and start the tax credit policies.

V. Policy Analysis

Imbalance Supply of Kindergartens

In 2016, it was estimated that 9 million kindergarten-age children could not enter a kindergarten in remote poor areas, which concentrated in the middle and the west of China.⁵⁰ From the report from China Development Research Foundation, the bottom 20% of the children in the rural poor area still lack the equal opportunity to be educated, for the imbalanced resources allocation.⁵¹ The kindergarten enrollment rate in remote poor areas was only 30% to 40% in 2015, far lower than the average rate in townships

⁴⁸ "Third Action Plan for Pre-school Education Development," *Ministry of Education of PRC*

⁴⁹ "The Pre-Education Law is under consideration of the State Council," *Beijing Youth Newspaper*. <https://news.163.com/19/0822/13/EN61RBS30001899N.html>

⁵⁰ Li Cui, "Research on the rationales of building kindergartens in remote poor areas." Master's thesis, *East China Normal University*, 2017.

⁵¹ "2017 Children Development Report," *China Development Research Foundation*, published in December, 2017, <https://cdrf.org.cn/jjh/pdf/fazhanbaogao.pdf>.

and villages.⁵² The Department of Education has to significantly boost enrollment rate in these areas, or the goal of 2025 is impossible to be reached.

The additional funding will focus on the 81 undeveloped areas, which still lack a kindergarten, based on the investigation of Northeastern Normal University in 175 poor regions.⁵³ Among these areas, the distribution of kindergarten-age children was scattered due to mountains, so that the areas included less than 40 kindergarten-age children account for 70%, so private kindergartens are unlikely to open, for that the tuition from these children was unable to cover the costs.⁵⁴ Public kindergartens also face the same problem, for children hardly enroll in a relatively far public kindergarten due to their inconvenience in transportation.^{55,56} Thus, to improve the enrollment rate, the Department of Education has to invest a significant amount of money in restoring education fairness.⁵⁷

⁵² "A problem that can't ignore: pre-school education in rural areas, " published on March <http://theory.people.com.cn/n1/2017/0323/c40531-29162998.html>

⁵³ *China Development Research Foundation*, "2017 Children Development Report."

⁵⁴ *China Development Research Foundation*, "2017 Children Development Report."

⁵⁵ Xiali Liu. "Research on pre-school education development difficulties in Chinese rural areas" *Education for Chinese After-school(Theory)*, 3 (2018): 16.

⁵⁶ Xia Liu. "Chinese rural areas."

⁵⁷ *China Development Research Foundation*, "2017 Children Development Report."

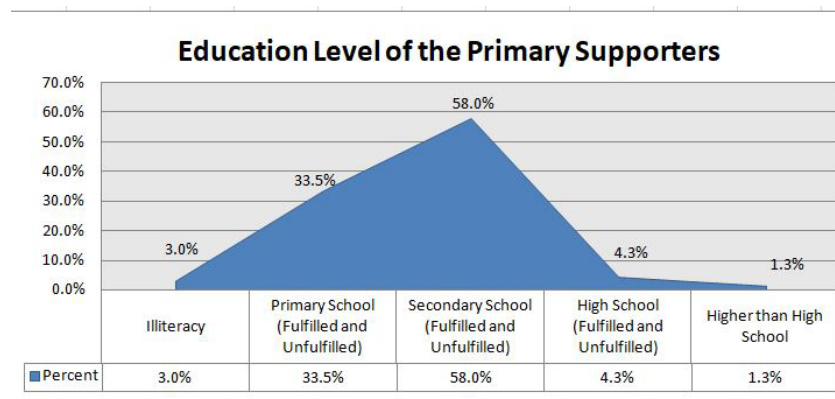


Figure 2. The education level of the Primary Supporters⁵⁸

National Child Development Plan for Poor Areas (2014-2020) stated that promoting education in poor areas, of which pre-school education plays a significant role, is the crux for cutting off the intergenerational transmission of poverty.⁵⁹ The lack of pre-school education opportunities will severely hurdle the development of poor area children in linguistic, cognitive, behavioral and social aspects, enlarging the gap between poor area children and other demographic groups.^{60, 61, 62} With more kindergartens constructed in remote poor areas, the children in these areas will have an equal education opportunity, which facilitates social equity and poverty alleviation.⁶³ Therefore, demands to alleviate poverty and promote social equity urges resources allocated for public kindergarten featuring non-profitable, reliable, and sustainable, in

⁵⁸ *China Development Research Foundation, "2017 Children Development Report."*

⁵⁹ "National Child Development Plan for Poor Areas (2014-2020)," *the State Council of PRC*, published in January 15, 2015, http://www.gov.cn/zhengce/content/2015-01/15/content_9398.htm

⁶⁰ "National Child Development Plan for Poor Areas (2014-2020)," *the State Council of PRC*, published in January 15, 2015, http://www.gov.cn/zhengce/content/2015-01/15/content_9398.htm

⁶¹ *China Development Research Foundation, "2017 Children Development Report."*

⁶² Li Cui, "Research on the rationales of building kindergartens in remote poor areas." Master's thesis, *East China Normal University*, 2017.

⁶³ *China Development Research Foundation, "2017 Children Development Report."*

these remote poor areas.^{64,65,66,67}

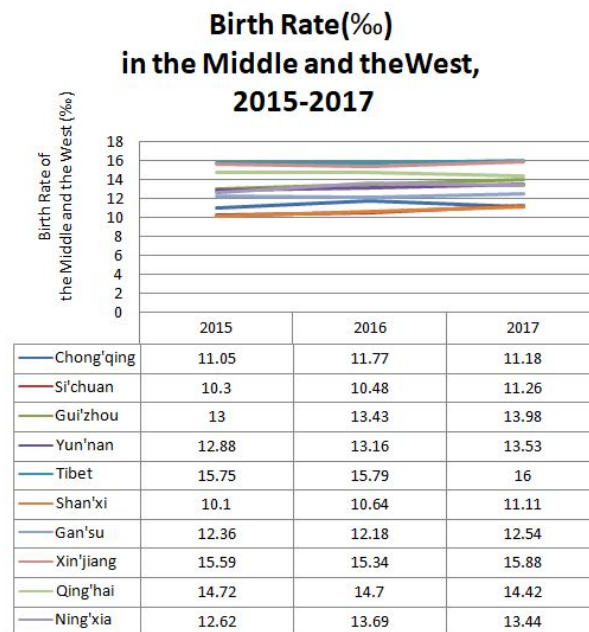


Figure 3. Birth Rate in the Middle and the West, 2015-2017

With a relatively steady birth rate in the middle and the west in recent years and an assumption that the birth rate will remain stable to 2022, the positions needed in 2025 is estimated to remain roughly the same as the positions in 2016, which is 9 million.⁶⁸ According to the China Development Research Foundation (CDRF), kindergartens in remote poor areas do not require investment in construction since more than 70% of the remote areas have unutilized spaces that can be used for kindergarten. However, they need a cost for sustaining the kindergartens.⁶⁹ The average cost of a kindergarten with

⁶⁴ China Development Research Foundation, "2017 Children Development Report."

⁶⁵ "China Statistical Yearbook 2016," *National Bureau of Statistics of China*, published in 2016, <http://www.stats.gov.cn/tjsj/ndsj/2016/indexch.htm>

⁶⁶ "China Statistical Yearbook 2017," *National Bureau of Statistics of China*, published in 2017, <http://www.stats.gov.cn/tjsj/ndsj/2017/indexch.htm>

⁶⁷ "China Statistical Yearbook 2018," *National Bureau of Statistics of China*, published in 2018, <http://www.stats.gov.cn/tjsj/ndsj/2018/indexch.htm>

⁶⁸ Li Cui, "Research on the rationales of building kindergartens in remote poor areas." Master's thesis, *East China Normal University*, 2017.

⁶⁹ "How to popularize pre-school education to the bottom 20% in poor areas," *China Development*

20 children is 30,000 yuan per kindergarten per year. Thus, the total cost of kindergartens in remote poor areas is 45 billion yuan.⁷⁰ Reported by the CDRF, they have received 9.8 million since 2011 from individuals and organizations for the use in remote poor area kindergartens.⁷¹

Safety Problem in Private Kindergartens

The safety problem is a primary concern of parents. After several famous scandals of private kindergartens exposed, the trust of parents to private kindergartens collapsed, and more parents prefer their children to stay at home to send them to private pre-schools.^{72,73} This distrust severely influences the supply of pre-school education, for a considerable fraction of private pre-schools are not reach their maximum capacity.⁷⁴ Trying to boost the enrollment rate without a sky-high level of investment, restoring the confidence in private kindergartens is critical, and the key is to ensure children's safety when they are away from their parents.⁷⁵ The installation of the surveillance system is useful and has been proposed several times. Take, for instance, in January 2018, Hunan's people's congress proposed to legislate compulsory surveillance systems installation for kindergartens.⁷⁶ Although many teachers have expressed

Research Foundation, accessed on November 12, 2019, <https://www.cdrf.org.cn/mtgz/4295.jhtml>

⁷⁰ "pre-school education to the bottom 20% in poor areas," *China Development Research Foundation*

⁷¹ "pre-school education to the bottom 20% in poor areas," *China Development Research Foundation*

⁷² "Zero Tolerance for Child Abuse," *Xinhuanet*, published on December 28, 2017, http://www.xinhuanet.com/2017-12/28/c_1122181033.htm

⁷³ "Beijing Kindergarten is accused of abuse, and Internet erupts in fury," *New York Times*, published on November 24, 2017, <https://www.nytimes.com/2017/11/24/world/asia/beijing-kindergarten-abuse.html>

⁷⁴ "Do you support or oppose the installation of surveillance system in kindergartens?," *Sina Weibo*, ended on November 27, 2017, http://topic.sina.cn/ht6052?wm=3049_0016&from=qudao

⁷⁵ *Sina Weibo*, "Do you support or oppose the installation of surveillance system in kindergartens?."

⁷⁶ "What does Transparent Kindergarten Bring to us: Happiness or Worry?," *LegalDaily*, published on February 6, 2018, <http://www.legaldaily.com.cn/index/content/2018/02/06/content7469096.htm?node=20908>

dissatisfaction for the installation on the ground of trust deterioration and privacy offense, the Dean of the School of Criminal Justice in the Shanghai University of Political Science and Law explained that the installation of the kindergarten surveillance systems could protect children from abuse while providing evidence for the teachers' vindication.⁷⁷

When considering the cause of child abuse, it is indicated that poor supervision and the low quality of teaching resources may be responsible.⁷⁸ In 2015, the certificate-holding rate of teaching resources was only around 50%.⁷⁹ According to a statistical report from the Department of Education in 2017, 22.4% of existing kindergarten teachers' education level was lower than high school.⁸⁰ Except for Beijing and Shanghai, the kindergarten teachers in other provinces ranked high in economic performances are shown an education level primarily in junior college and high school.⁸¹

According to the budget report of Lanxi government, the cost for surveillance equipment for one kindergarten is around 44,500 yuan.⁸² At present, more than half of the cities have started to install surveillance equipment for the kindergartens. Based on

⁷⁷ *LegalDaily*, "What does Transparent Kindergarten Bring to us: Happiness or Worry?."

⁷⁸ Yabo Fan, Xiong Yang, and Xiaoping Yang, "The development of kindergarten teachers in the new era: the present and the future- an empirical study based on evidences from 5 cities in Chongqing." *Journal of Teacher Education* 6, no. 2 (2019): 15-25.

⁷⁹ *Ibid.*

⁸⁰ "3 Million Positions for Kindergarten Teachers: 22.4% own education level in lower than high school," *Xinhuanet*, published on November 26, 2017, <http://m.xinhuanet.com/hn/2017-11/26/c1122011770.htm>

⁸¹ *Ibid.*

⁸² "Budget report for kindergarten surveillance system," *Lanxi government*, published on August 22, 2019, http://www.lanxi.gov.cn/zwgk/ggzyjy/zfcg/201908/t20190822_4159735.html

the number of non-profit kindergarten in 2018, the total cost estimated for surveillance pieces of equipment in kindergartens is 39.3 billion yuan.⁸³

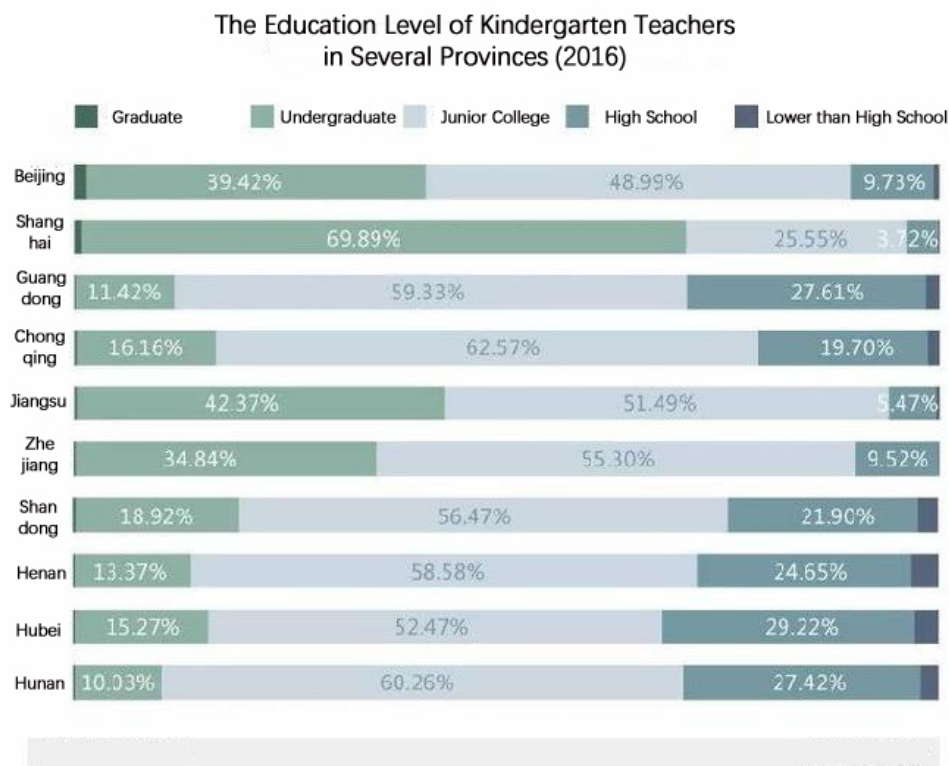


Figure 4. Data of Kindergarten Teachers' Education Level for Several Provinces⁸⁴

Tax Credit for Parents

Providing security assurance and professional qualification could partially relieve the harsh situation. However, with a tremendous burden, many parents have to cede the financial situation when they cannot have the luck to get the precious chance to send their children to the public kindergartens. This policy aims to offer financial incentives

⁸³ "Kindergarten Overview in 2018," *Chinese Business Industry Research Center*, published on February 26, 2019, <http://www.askci.com/news/chanye/20190226/1043141142323.shtml>

⁸⁴ "3 Million Positions for Kindergarten Teachers," *Xinhuanet*.

to parents who are suffered from the unfairly high tuition of private pre-school education.

The tax credit will reduce the financial burden brought by the tuitions significantly, especially with the gradual income tax system in China. Take, for instance, the private kindergarten in Beijing. The average monthly tuition of private kindergartens is about 1500 yuan with an unknown median number.⁸⁵ Assume the median number of tuition is 1000 since there are high-end private kindergartens, which set their tuitions up to 15,000 per month, increasing the average tuition significantly. Then the government in Beijing should provide 1000 tax credit for parents who have to send their children to private kindergartens. In the following chart, several levels of income are listed, and the influence of the provided tax credit is shown. It is evident that the tax credit helps improve the actual income level substantially and reduce the tuition burden. From the retained percentage of income, the tax credit lulls the financial burden more significantly for people with low income than high income, presenting the objective of this policy, providing necessary assistance to the neediest families.

Accounting for different price levels across China, the tuition of private kindergartens varies typically. Developed cities, such as Beijing, Shanghai, and Shenzhen, have the most significant number and the highest average tuitions of private kindergartens, and these cities will require a substantial share of funding to provide the tax credit.⁸⁶

⁸⁵ "Difficulty in kindergarten admission and high tuition burden," *Xinhua News*.

⁸⁶ "Difficulty in kindergarten admission and high tuition burden," *Xinhua News*

Contrarily, undeveloped towns and villages may need only an infinitesimal percentage, since most of them have few or completely no private kindergartens. Based on the enrollment statistics, the amount of enrolled children in private kindergartens was 28.38 million in 2018.⁸⁷ With demographic data of income, 22% of families have relatively low income, under the 5000 threshold, and 25% of families are within 5000 to 8000 interval in 2020.⁸⁸ National wide, the Department of Education will need 14.02 billion yuan (about 2 billion dollar) to conduct this specific policy. The whole spending on these three implementations is 98.32 billion yuan (about 14 billion dollar), taking 26.78% of current spending on pre-school education in 2018.⁸⁹

Monthly Income	After Tax Income	Disposable Income After Tuition		Disposable Income After Tuition (Percentages)		Increment on Income
		Without Tax Credit	With Tax Credit	Without Tax Credit	With Tax Credit	
5000	4710	3210	3500	64.2%	70.0%	9.0%
8000	7410	5910	6500	73.9%	81.3%	10.0%
11000	10110	8610	9500	78.3%	86.4%	10.3%
14000	12610	11110	12110	79.4%	86.5%	8.9%
17000	15010	13510	14510	79.5%	85.4%	7.4%
20000	17410	15910	16910	79.6%	84.6%	6.3%

Table 1. Influence of Policy by Tax Credit

⁸⁷ “Statistics in Pre-school Education in China,” *Industrial Information*. Published on August 7th, 2018. <https://www.chyxx.com/industry/201808/665112.html>

⁸⁸ “Family Income in China,” *Industrial Information*. Published on July 12th, 2018. <https://www.chyxx.com/industry/201807/657981.html>

⁸⁹ Summary of 2018 Budget. *Ministry of Education of the People’s Republic of China*. Published on April 30th, 2019. http://www.moe.gov.cn/jyb_xwfb/gzdt_gzdt/s5987/201904/t20190430_380155.html

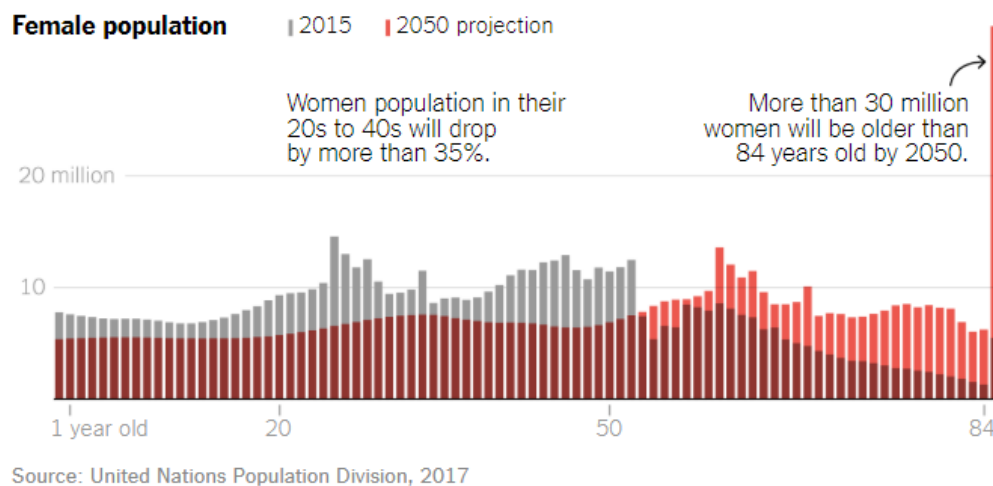
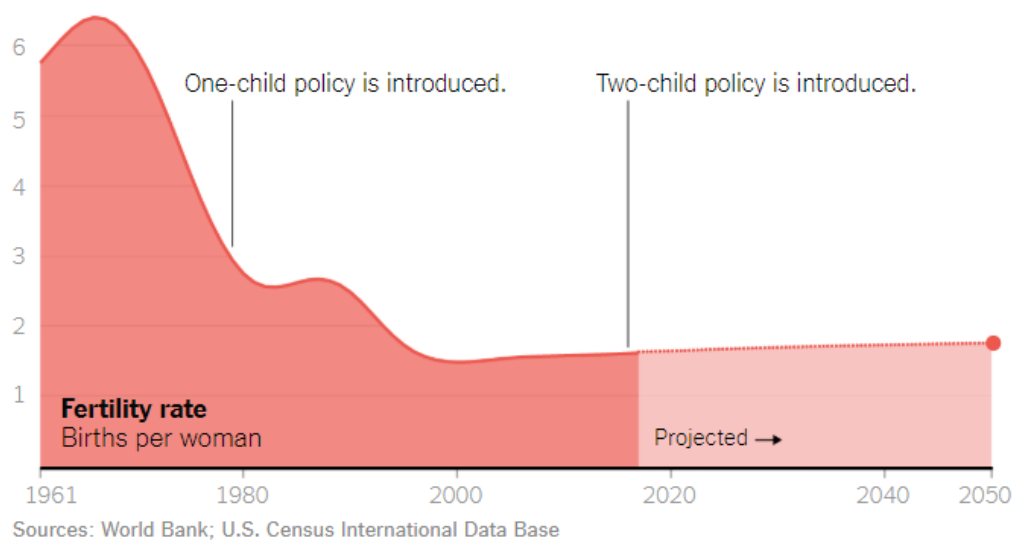


Figure 5. Female Population and Fertility Rate⁹⁰

With effective implementation, the proposal does have negative influences. As predicted, under current policies, the fertility rate of women will remain stable in the next 30 years, whereas the women population in fertility age will decrease by more than 35% in 2050.⁹¹ Thus, the children born in the next 30 years will much less than the present, which means that the need for kindergartens in the future is not as demanding

⁹⁰ "China's looming crisis: a shrinking population," *New York Times*, published on January 17, 2019, <https://www.nytimes.com/interactive/2019/01/17/world/asia/china-population-crisis.html>

⁹¹ Ibid.

as today. With more kindergartens are built at the end year of the proposal while fewer children are given birth in the future, a part of kindergartens is expected to be in idle, incurring a waste of land resources, human resources, and financial resources.

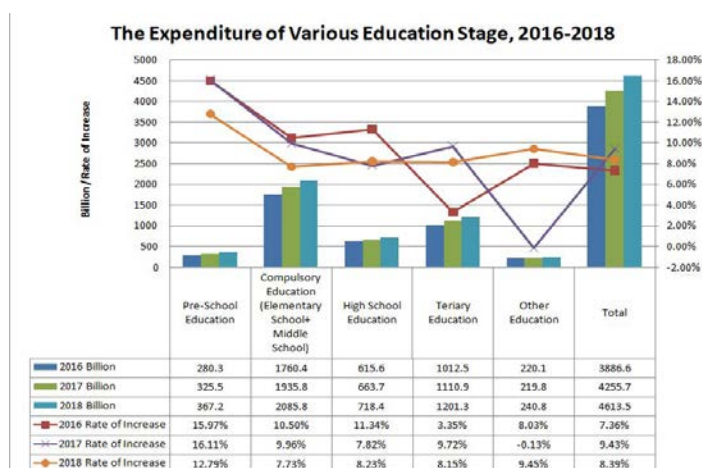


Figure 6. The Expenditure of Various Education Stage, 2016-2018^{92,93,94}

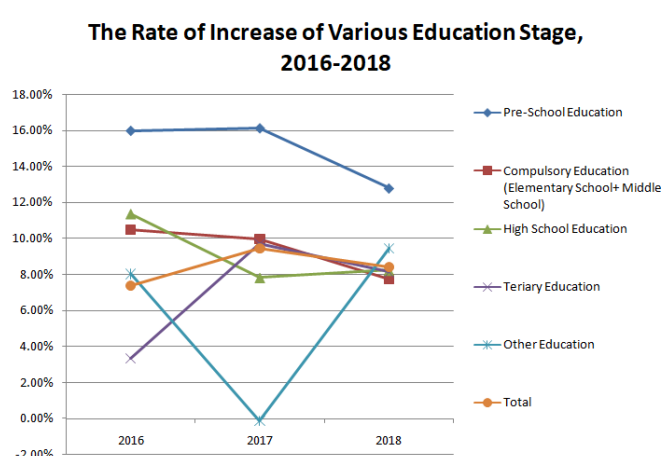


Figure 7. The Rate of Increase of Various Education Stage, 2016-2018^{95,96,97}

⁹² "2016 Education Expenditure Report," *MoE*, published on May 3, 2017, http://www.moe.gov.cn/jyb_xwfb/gzdt_gzdt/s5987/201705/t20170503_303595.html

⁹³ "2017 Education Expenditure Report," *MoE*, published on May 8, 2018, http://www.moe.gov.cn/s78/A05/moe_702/201805/t20180508_335293.html

⁹⁴ "2018 Education Expenditure Report," *MoE*, published on April 30, 2019, http://www.moe.gov.cn/jyb_xwfb/gzdt_gzdt/s5987/201904/t20190430_380155.html

⁹⁵ "2016 Education Expenditure Report," *MoE*

⁹⁶ "2017 Education Expenditure Report," *MoE*

⁹⁷ "2018 Education Expenditure Report," *MoE*

The additional investment in pre-school education will produce intense crowding out effects on other expenditures. From the figures, the amount of expenditure on each education stage has increased each year from 2016 to 2018. The rate of increase for pre-school education has been the highest one for three years and is much higher than any other stage. From 2016 to 2018, the normal rate of increase is approximately 3.5%-11% in main education stages (i.e., compulsory education, high school education, and tertiary education), whereas the rate of increase for pre-school education is 12.5%-16%. The total rate of increase is around 8%. Since this proposal requires a higher rate of increase for pre-school education, increased the expenditure of pre-school education in the proposed years is likely to crowd out resources in other stages. The increased speed of pre-school education is so fast that total expenditure growth is unable to cover it. In this way, the government may have to move the resources allocated to other stages in the pre-school education stage in the proposed years, and the crowding out effect may defer the development of other education period.

VI. Political Analysis

According to a survey from China Youth Daily based on 2,002 valid samples, children's safety, teachers' qualification, and tuition fees are concerned extensively by parents. 70.3% of parents claim they concern children's safety in the kindergartens, 64.7% of parents indicate that teachers should have qualifications, and 42.7% of parents believe that tuition fees of the kindergartens should be more reasonable.⁹⁸ For parents' concern

⁹⁸ "Lacking of pre-school education resources," *Xinhuanet*, published on May 9, 2017, http://www.xinhuanet.com/2017-05/09/c_1120938884.htm

about children's safety and teachers' qualification, the popularization of surveillance system in kindergartens and enhanced inspection of teachers' qualification can address them. When asking about which agency the parents support most to run a kindergarten, 75.9% of parents choose education department of the governments, whereas 7.1% of parents select private sector, which indicates a demanding urge for the governments to invest in and manage kindergartens.⁹⁹

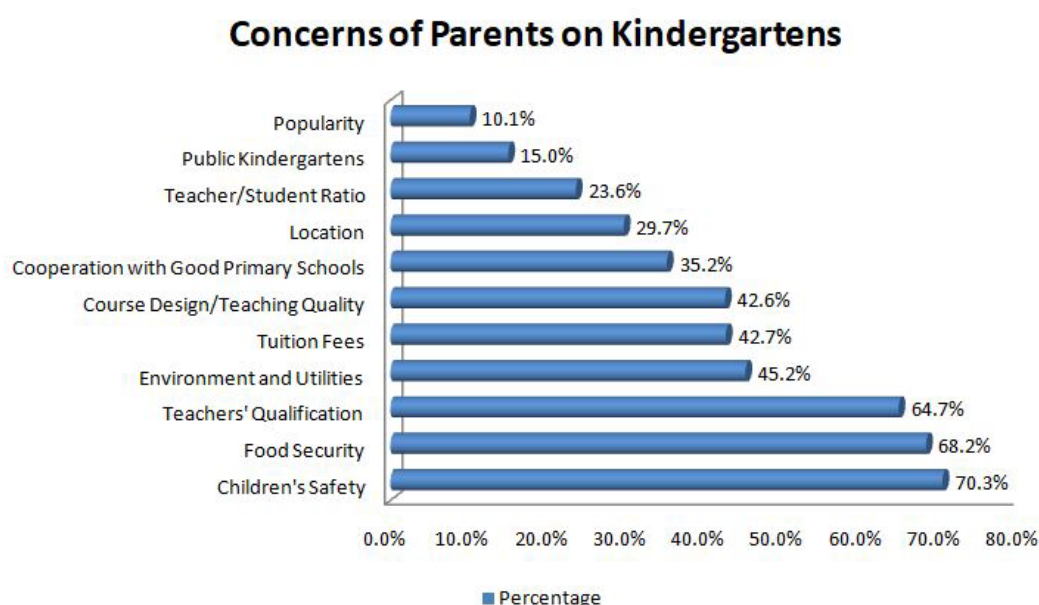


Figure 8. Concerns on Kindergartens

Undeniably, 3-to-6-year-old children group is one of the stakeholders who is likely to bolster the proposal protecting their safety. Research indicated that children who suffered abuse in early childhood would have severe consequences, including permanent or contemporary impairments in physical bodies, capabilities of perception, cognition, and emotion, and psychological health.¹⁰⁰

⁹⁹ Ibid.

¹⁰⁰ Xie Ling & Li Meijin, "Effects and Causes of Children Abuse," *China Youth Social Sciences* 2 (2018):

As shown by Pre-school Education Evaluation Report released by MoE in 2015, teachers without proper qualifications accounted for 17%, and 22% of all the teachers were not qualified at all.¹⁰¹ In the rural area, the rate of teachers without a qualification reached 44%.¹⁰² During employment, about half of the companies which invested in or actually run a kindergarten did not require a proper teacher qualification in pre-school education classification or even in other classifications.¹⁰³

The employment standards of kindergarten teachers are low, which is beneficial to those who do not have a proper teaching qualification while detrimental to the teachers who do have, for that those without a proper qualification increase the supply in kindergarten teacher market, lowering down the salary of qualified teachers and the whole market.¹⁰⁴ In 2016, the monthly income of a kindergarten teacher who owns a bachelor degree is 3,504 yuan, which is 872-yuan lower than the average income of the practitioners with a bachelor degree in other categories.¹⁰⁵

Consequently, the supply of potential kindergartens with a proper qualification may decrease when they perceive unsatisfied job return.^{106,107} As estimated, by 2021, the

5. <http://www.cnki.com.cn/Article/CJFDTotal-ZQNZ201802005.htm>

¹⁰¹ Pre-school education evaluation report," Ministry of Education of PRC, released on November 24, 2015, http://www.moe.gov.cn/jyb_xwfb/xw_fbh/moe_2069/xwfbh_2015n/xwfb_151124/151124sfcl/201511/t20151124_220650.html

¹⁰² Ibid.

¹⁰³ "The unresolved dilemma of kindergarten teachers," *Xinhuanet*, published on November 17, 2017, http://www.xinhuanet.com//video/sjxw/2017-11/17/c_129743561.htm

¹⁰⁴ Ibid.

¹⁰⁵ "The unresolved dilemma of kindergarten teachers," *Xinhuanet*, published on November 17, 2017, http://www.xinhuanet.com//video/sjxw/2017-11/17/c_129743561.htm

¹⁰⁶ Ibid.

¹⁰⁷ "A 3-million gap of kindergarten teachers," *Xinhuanet*, published on November 26, 2017, http://m.xinhuanet.com/hn/2017-11/26/c_1122011770.htm

job gap of kindergarten teachers with qualification will reach 3 million.¹⁰⁸ Adopting harsher enforcement on proper teaching qualification check during employment can address this problem in a large extent, by giving back the benefits to qualified teachers they deserved through the lever effect of supply-demand dynamics.¹⁰⁹ Thus, current qualified teachers, potential qualified teachers and the governments are likely to buttress the proposal. Nevertheless, the harsher enforcement of qualification check will gradually squeeze current teachers without proper qualifications out of the market, which means that this kind of stakeholder group may oppose the proposal.

For the popularization of kindergarten surveillance system, the opinions of kindergarten teachers are relatively negative. A survey from People.cn indicated that, approximately 80% of kindergarten teachers believed that the installation of kindergarten surveillance system will impede their privacy.¹¹⁰ However, the Article 38 of the *Tort Liability Law* states: "If a person with no capacity for civil conduct suffers personal injury while studying or living in a kindergarten, school or other educational institution, the kindergarten, school or other educational institution shall bear responsibility, but if it can prove that it has taken adequate education and management responsibilities, it shall not bear responsibility."¹¹¹ This means that teachers can virtually benefit from the proposal when they are under suspecting. To comfort the resistance from the teachers

¹⁰⁸ Ibid.

¹⁰⁹ "What is camera looking for," *People.cn*, published on May 27, 2013, <http://edu.people.com.cn/n/2013/0527/c1053-21628580.html>

¹¹⁰ "Regulating surveillance system in kindergartens," *Xinhua net*, published on January 7, 2019, http://www.xinhuanet.com/comments/2019-01/07/c_1123954646.htm

¹¹¹ "Regulating surveillance system in kindergartens," *Xinhua net*

on privacy, the governments can propagandize the benefits of the surveillance system for the teachers themselves.

Currently, the profit rate of kindergartens is around 25% to 30%, which means that a private kindergarten only needs two to three years to cover its initial costs.¹¹² For profit mongers, the hasher enforcement of qualification will also raise the costs for businesses and cut down the profits as well as ROI under the national restriction on overly profit-seeking.¹¹³ With less profits and ROI, private sector may be discouraged to invest in or virtually run a kindergarten.¹¹⁴ On the first day after the restriction announcement, the share price decline of listed companies in pre-school education sector reached 60%.¹¹⁵ Qunxing Toy Company, which used to announce a 20-million investment in kindergartens, recanted the plan after the declaration of the restriction.¹¹⁶

The governments at local levels, province levels and central levels are a significant stakeholder group under the proposal. From the *Report of the State Council on the Reform and Development of Preschool Education*, the Central government has promised to the Chinese public that they will continue to increase the investment in pre-

¹¹² "The profit rate of a private kindergarten can reach 30%," *China Early Childhood Education Organization*, published in December, 2017, http://www.eduzjw.com/html/201712/content_435.htm

¹¹³ "Review on the pre-school education industry: stemming overly profit-seeking may impede the way of kindergarten capitalization," *Everbright Securities*, published on November 16, 2018, http://pdf.dcfw.com/pdf/H3_AP201811161246953545_1.pdf

¹¹⁴ "The winter of pre-school education industry: IPO may withdraw the capital invested in pre-school education," *Beijing News*, published on November 16, 2018, <http://www.bjnews.com.cn/finance/2018/11/16/522157.html>

¹¹⁵ "27 companies suffered tremendous turmoil after the IPO restriction," *Xinhuanet*, published on November 19, 2018, http://www.xinhuanet.com/2018-11/19/c_1123731839.htm

¹¹⁶ "27 companies suffered tremendous turmoil after the IPO restriction," *Xinhuanet*

school education development.¹¹⁷

According to aforementioned results of parents' concern, it is favorable for the Central government to address the concerns which can further address fertility and labor problems.¹¹⁸ According to a survey of All-China Women's Foundation in 10 provinces, 53.3% of parents were not willing to have a second child.¹¹⁹ The top reasons included kindergarten enrollment and further school enrollment (80%), and family financial burden (70%), and parent's physical and psychological costs (70%).¹²⁰

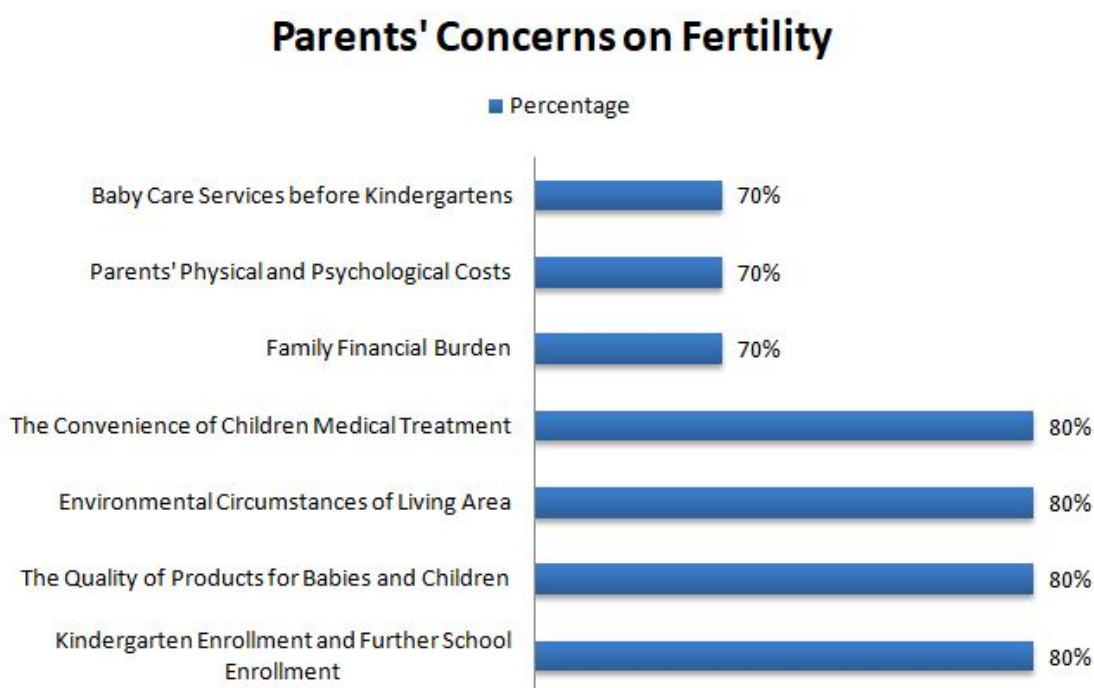


Figure 9. Concerns on Fertility

¹¹⁷ "Report of the State Council on the Reform and Development of Preschool Education," *National People's Congress*, published on August 22, 2019, <http://www.npc.gov.cn/npc/c30834/201908/1c9ebb56d55e43cab6e5ba08d0c3b28c.shtml>

¹¹⁸ "Lacking of pre-school education resources," *Xinhuanet*, published on May 9, 2017, http://www.xinhuanet.com/2017-05/09/c_1120938884.htm

¹¹⁹ "Why the willingness of fertility is low," *Xinhuanet*, published on January 4, 2017, http://www.xinhuanet.com/2017-01/04/c_129431439.htm

¹²⁰ Ibid.

Particular to remote poor areas, developing pre-school education in remote poor areas has admitted as a strategy to alleviate poverty, promote education equity, and facilitate social mobility, which are all the national development goals mentioned in the *Outline of National Medium and Long-term Education Reform and Development Plan (2010-2020)*.^{121,122,123}

Internationally, in the end of 2010, China made a commitment to the United Nations Children's Fund (UNICEF) that China would strive to develop pre-school education in the next decade, in order to promote children's welfare.¹²⁴ The commit included a gradually increasing investment in pre-school education used to with a preference in rural areas.¹²⁵ After that, UNICEF has expressed its attention and appreciation for China's government through official posts and international meetings.^{126,127}

VII. Recommendation

The Department of Education has to implement an effective method to enhance the kindergarten supply, preparing for the upcoming baby boomers introduced by the 2016

¹²¹ "Outline of National Medium and Long-term Education Reform and Development Plan (2010-2020)," *The Central People's Government of PRC*, published on July 29, 2010, http://www.gov.cn/jrzq/2010-07/29/content_1667143.htm

¹²² NPC, "Report of the State Council."

¹²³ "National Development Plan for Children in Poor Areas (2014-2020)," *the Central People's Government of PRC*, published on January 15, 2015, http://www.gov.cn/zhengce/content/2015-01/15/content_9398.htm

¹²⁴ "China push universal pre-school launched," *UNICEF*, published on May 9, 2012, <https://www.unicef.cn/press-releases/china-push-universal-pre-school-launched>

¹²⁵ Ibid.

¹²⁶ "UNICEF joins government China celebrate Early Childhood Development Month," *UNICEF*, published on May 22, 2015, <https://www.unicef.cn/press-releases/unicef-joins-government-china-celebrate-ecd-month>

¹²⁷ "The 8th Early Childhood Development Month," *MoE*, published on May 29, 2019, http://www.moe.gov.cn/jyb_xwfb/xw_zt/moe_357/jyzt_2019n/2019_zt12/xczj/yw/201905/t20190529_383630.html

Universal Two-Child Policy.¹²⁸ Both one-year and three-year pre-school enrollment rates have decreased compared to three years ago, diminishing the possibility of achieving the required enrollment rate in 2025 by the pre-school education report published by the Central Government in 2017.¹²⁹ The Department of Education has to initiate a more effective and efficient plan to deal with the boosted number of newborns in the future, to fulfill the goal of 2025.

Based on the requirement of the Nation Congress, the Department of Education needs to initiate the Pre-School Education Law in 2020, a critical chance to build a whole legal structure. The several current amendments of pre-school education are attached to the Education Promoted Law of comprehensive education, instead of a specific regulation towards the pre-school period.¹³⁰ The new specific law could serve as a great opportunity to fully reform the flawed system of pre-school education into adapting a higher requirement of parents.

This proposal could significantly increase the enrollment rate, matching the pre-settled objective of one-year and three-year pre-school enrollment, reversing the recently downward trend after initiating the Two-Child Policy.¹³¹ However, after the first high wave of baby boomers, the capacity of kindergartens may be impaired since the willingness to giving birth has decreased, comparing to three years ago.¹³² With

¹²⁸ Lijuan Pang, et al "Universal Two-Child Policy Context." *Journal of Beijing Normal University*.

¹²⁹ "Third Action Plan for Pre-school Education Development," *Ministry of Education of PRC*

¹³⁰ "Third Action Plan for Pre-school Education Development," *Ministry of Education of PRC*

¹³¹ "Education Statistic Report," *Ministry of Education of PRC*

¹³² "Annual New Born Population," *KANTAR US*

smaller needs in the future, current additional investment in kindergartens may become less efficient, and a fraction of kindergartens may operate under the full capacity, causing a waste of resources.

The additional investment will be 98.32 billion yuan per year, taking 26.38% of the current budget for pre-school education. Although the Department of Education has progressively increased the overall budget, in the next few years, the investment will crowd out the budget in other categories. Indeed, conducting this proposal may produce a negative influence on many sides, deferring development in many aspects. However, the upcoming baby boomers enhance the priority of pre-school education and directly improve the importance of the proposed policy. The Department of Education must prepare for the increased need since the first wave of baby boomers is at the door. This proposal provides practical and cost-effective methods to boost the supply of kindergartens significantly, so I hereby recommend this proposal.

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EDUCATION BACKGROUND

Johns Hopkins University 09/2018-12/2019
Major: Public Management **Current GPA:** 3.90

Hong Kong Baptist University
Graduated with First Class Honor 09/2014-06/2018
Major: Public Relations and Advertising **GPA:** 3.44
Core Courses: Statistics; Communication Research, Research in Public Relations, Organizational Behavior, Introduction to Economics, Games and Economic Decisions, Financial Mathematics

ACADEMIC PROJECT

How Social Media Influence Word-of-mouth Advertising
Co-Author 2016

- Researched human beings' diverse behavioral changes in social media within the new social environment, particularly on public administration.

Research of influential factors of young women's awareness and attitudes: Media usage of emergency contraception pills
Co-Author 12/2016

- Researched the relationship between media usage and young women's awareness towards emergency contraception pills;
- Offered supportive evidence to make public policies;
- Guided young women's correct understanding towards emergency contraception pills;
- Utilized SPSS to have quantitative data analysis and provide reasonable conclusions with better reliability.

Learning shifting cultural trends in China. A quantitative study into the implications of lucky number price ending strategies in the Chinese market
Co-Author 05/2018

- Researched the possible influential superstitious factors towards pricing strategies;
- Provide sufficient evidence for companies trying to utilize superstitious culture;
- Presented in 27th World Business Congress in HK;
- Utilized AMOS to adopt Structural Equation Modeling (SEM) building a reasonable and solid conceptual model.

INTERNSHIPS

ICBC International Holdings Limited 05/2019-08/2019
Research Assistant

- Collect related policy and economic information in Guangdong-Hong Kong-Macao Greater Bay Area;
- Help director craft IPO plans for clients;
- Survey recent questions contained in inquiries from the China Securities Regulatory Commission;

China CREC Railway Electrification Bureau (Group) 06/2017-09/2017
Public Relations Assistant

- Collected and analyzed on original railway programs, and offered suggestions to ongoing ones' decision-making;
- Scrutinized foreign railway's developmental strategies, and made conclusions by referring to domestic environment.

The International Cooperation Committee of Animal Welfare 09/2017- 06/2018
Assistant of Translation and Data Analysis

- Collect information on illegal hunting and sale of endangered animals, and analyze data to find potential solutions;
- Translate English articles of foreign animal welfare organizations, and seek opportunities to cooperate with them.

EXTRACURRICULAR ACTIVITIES

Peer Mentor 02-06/2016;09/2016-01/2017
Freshman Tutor

- Assisted freshman to preview and review lessons & answered their questions.

China University Students Public Relations Plan Contest 09/2017
Leader of the Group

- National First Prize
- Created the publicity plan for the public welfare program "Beautiful Career and Life" held by L'Oreal.
- Aimed to help the urban and rural disadvantaged women and encourage them.

The National College Award Contest in China 06/2018

- Created the transition plan for the Tencent News facing the challenge of social media.
- Developed a comprehensive analysis from both market and academic.

HONORS& AWARDS

The Second-Class Scholarship 12/2016&2017

The Second-Class Prize in National High School Mathematics Competition 2012&2013

The First-Class Prize in Chinese Mathematical Olympic Collaboration Summer Camp 07/2012

The First Prize in China University Students Public Relations Plan Contest 09/2017

The Winner Prize in 16th The National College Award in China 06/2017

OTHER INFORMATION

Computer Skills: Proficient in office software, statistical software (Stata and R) and Python

Professional Skills: Qualitative and quantitative analysis, data collection, etc.

Professional Certification: Current member of Society of Actuaries, pursuing Associate of the Society of Actuaries certification. Have passed Exam Financial Mathematics and Exam Probabilities; Current member of CFA Institute, pursuing the Chartered Financial Analyst. Have passed CFA Level 1.